

# Nichrome Resistor Networks on Ceramic Substrates

Model 694, 698, 699 Series

- Isolated, bussed and other circuits
- Thin film resistor network
- 0.300" PDIP packages
- RoHS compliant

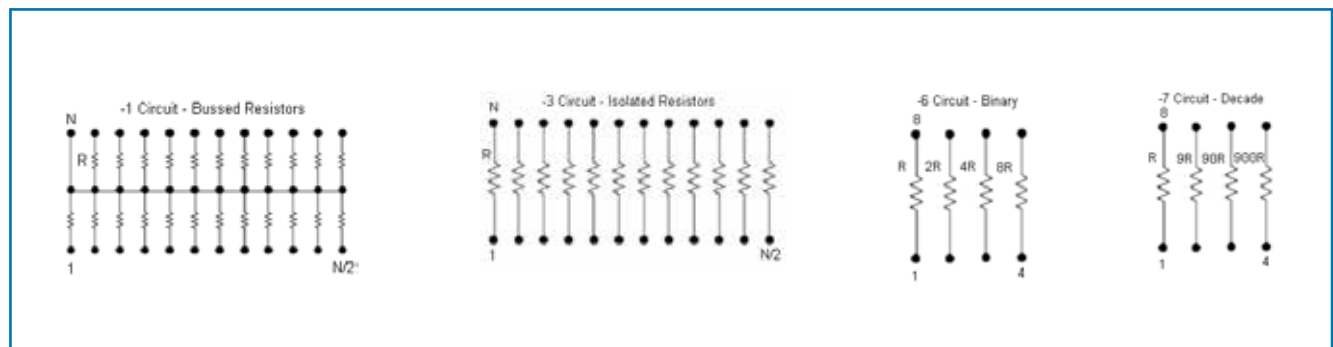


## Not Recommended for New Designs

### Features

Precision Nichrome Resistors on Ceramic	Passivation coating provides protection in humid environments Excellent frequency response Excellent long term resistance stability
Industry Standard Packaging	JEDEC 95, MS-001 (Plastic DIP 0.300 inch wide in 8, 14 and 16 lead pin counts)
Ratio Tolerances	< ± 0.05%
TCR Tracking Tolerances	< ± 5 ppm/°C

### Schematics



### Electrical<sup>1</sup>

Standard Resistance Range <sup>2</sup>	1K ohms to 100K ohms (Isolated) 1K ohms to 45K ohms (Bussed)
TCR <sup>3</sup>	± 25 ppm/°C
TCR Tracking <sup>3</sup>	± 5 ppm/°C
Operating Temperature Range	-55°C to +125°C
Interlead Capacitance	< 2pF
Insulation Resistance	≥ 10,000 Megohms
Maximum Operating Voltage	100 Vdc or √ PR
Noise, Maximum (MIL-STD-202, Method 308)	-40 dB
Resistor Power Rating at 70°C	0.1 Watts

1 Specifications subject to change without notice.

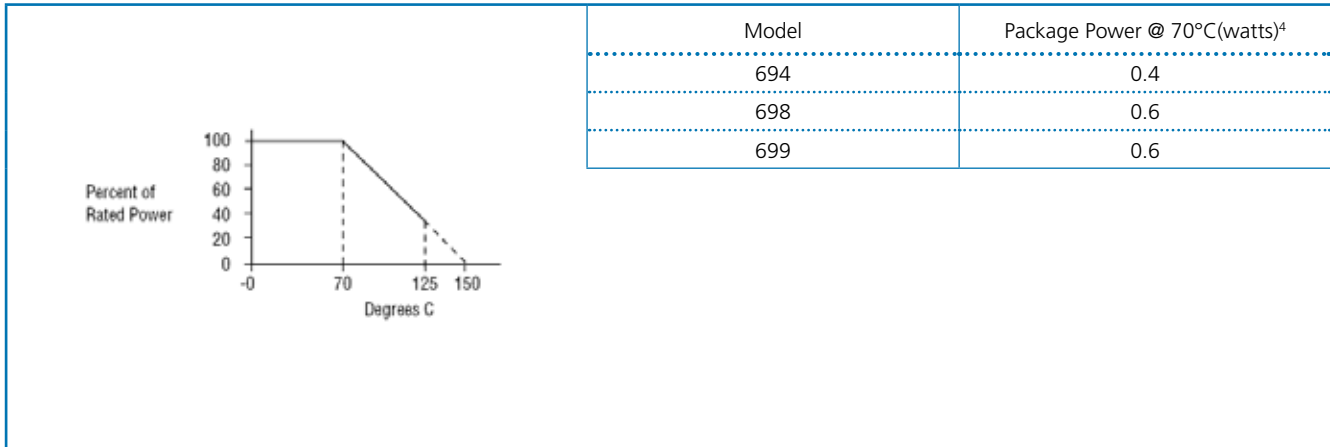
2 E96 codes available.

3 Standard limits for all resistance codes.

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## Package Power And Derating Curve



## Environmental (Mil-R-83401)

Thermal Shock plus Power Conditioning	ΔR 0.25%
Short Time Overload	ΔR 0.1%
Terminal Strength	ΔR 0.1%
Moisture Resistance	ΔR 0.2%
Mechanical Shock	ΔR 0.25%
Vibration	ΔR 0.25%
Low Temperature Operation	ΔR 0.1%
High Temperature Exposure	ΔR 0.1%
Load Life, 1,000 Hours	ΔR 0.1%
Resistance to Solder Heat	ΔR 0.1%
Dielectric Withstanding Voltage	200V for 1 minute
Marking Permanency	MIL-STD-202, Method 215
Lead Solderability	MIL-STD-202, Method 208
Flammability	UL-94V-0 Rated
Storage Temperature Range	-65°C to +125°C

## Mechanical

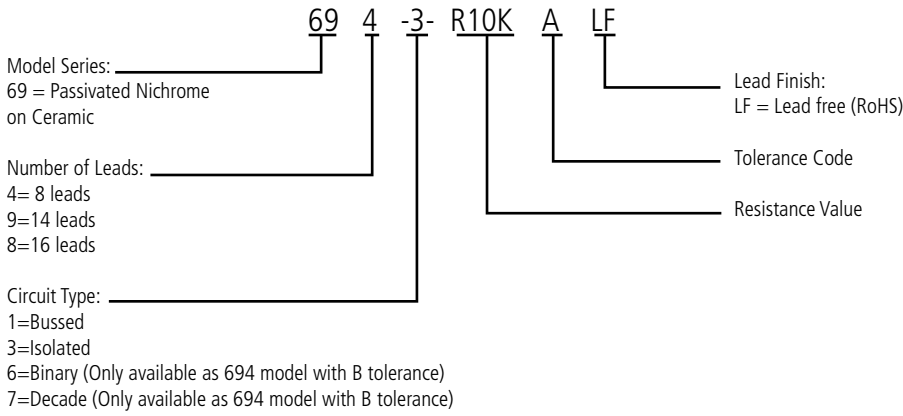
Lead Plating	100 matte Tin (RoHS)
Lead Material	Copper Alloy
Lead Configuration	Thru hole
Substrate Material	Alumina
Resistor Material	Passivated Nichrome
Body Material	Molded Epoxy

<sup>4</sup> Maximum power per resistor @ 70°C is 100 mW, not to exceed package power

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## Ordering Information<sup>5</sup>



## Resistance Code<sup>5</sup>

Standard values follow E96 table. Character “K” denotes a multiplier of 1000.

## Resistance Tolerance Code

Accuracy Code at 25°C	A	B	D	F
Absolute Resistance Tolerances (%)	± 0.1	± 0.1	± 0.5	± 1.0
Ratio Tolerances (R1 Ref) (%)	± 0.05	± 0.1	± 0.1	± 0.5

## Packaging Options (Unit Count/Tube)

Model + Pin count	Unit Count/Tube
694	100
699	50
698	50

## Typical Marking

